

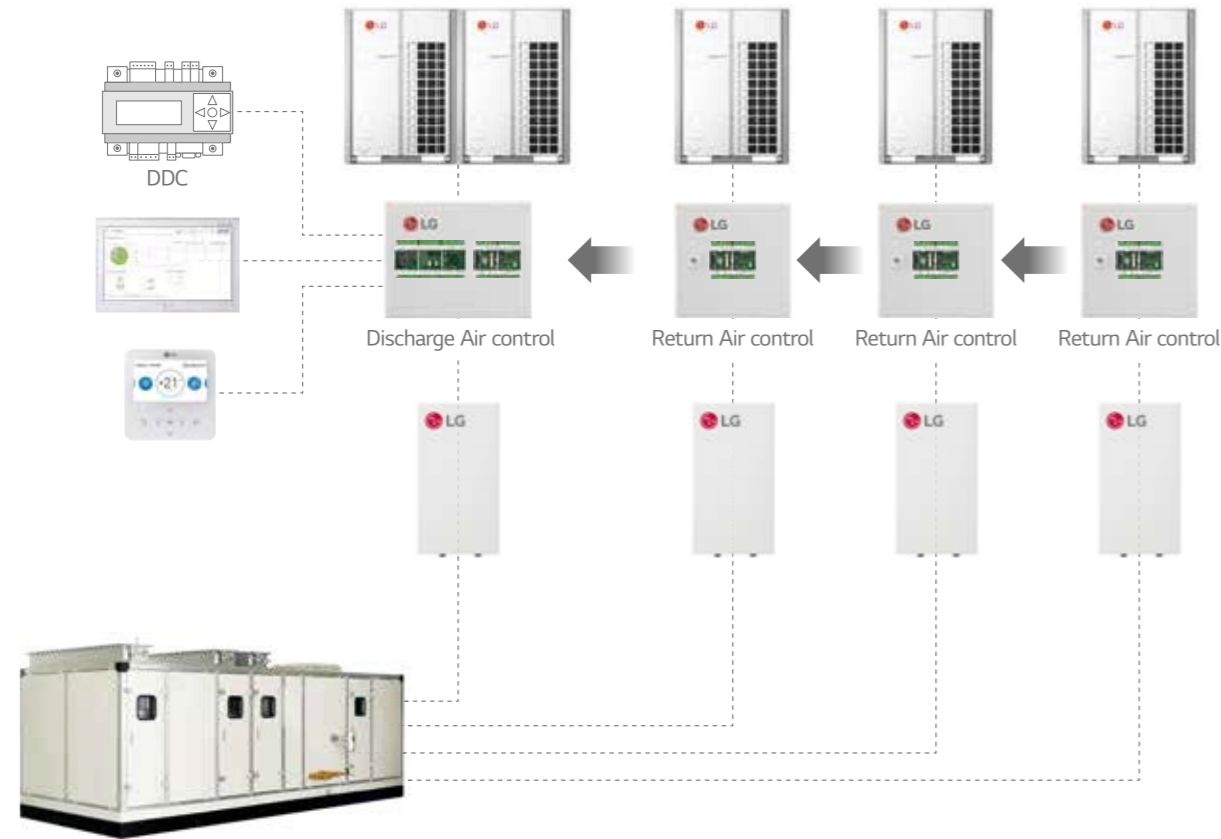
# AHU Kit

## Communication Kit

### Expandable System Design

LG AHU system can be a suitable solution for various sites due to its application flexibility and wide range of line up with large capacity models. According to the required capacity, a single or multiple module combination is possible due to the AHU communication kit's modular design.

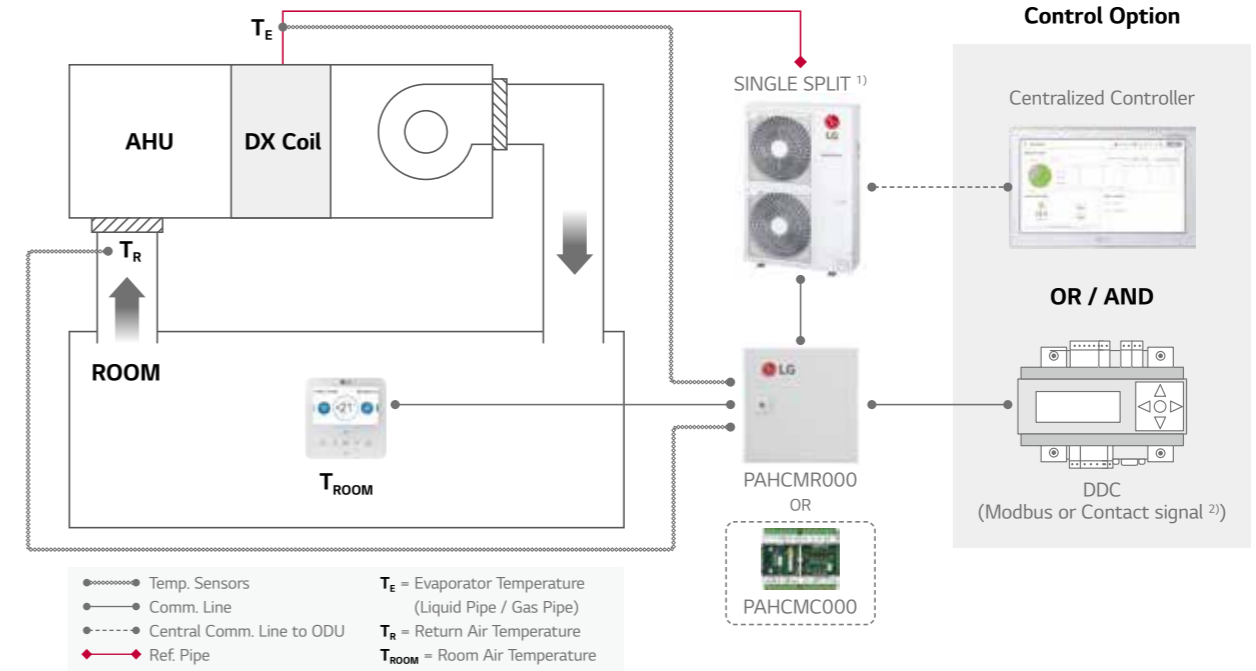
- Multiple module combination for large capacity AHU



## Communication Kit & Controller Module

### Single Split Application

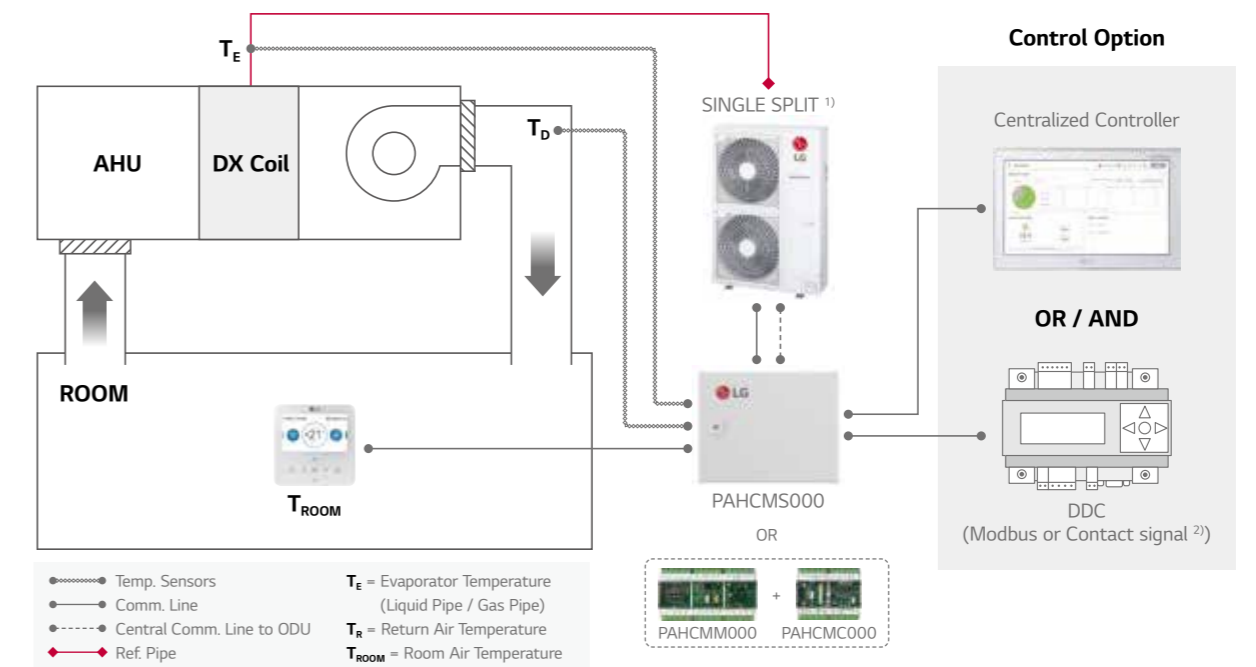
Single Split + Return / Room Air Temperature Control



1) PI485 (PMNFP14A1) is required for centralized controller.  
2) In case of applying DDC with contact signal, discharge air temperature should be measured and controlled by DDC.  
Note : For more detail, please refer to the PDB.

### Single Split Application

Single Split + Discharge Air Temperature Control



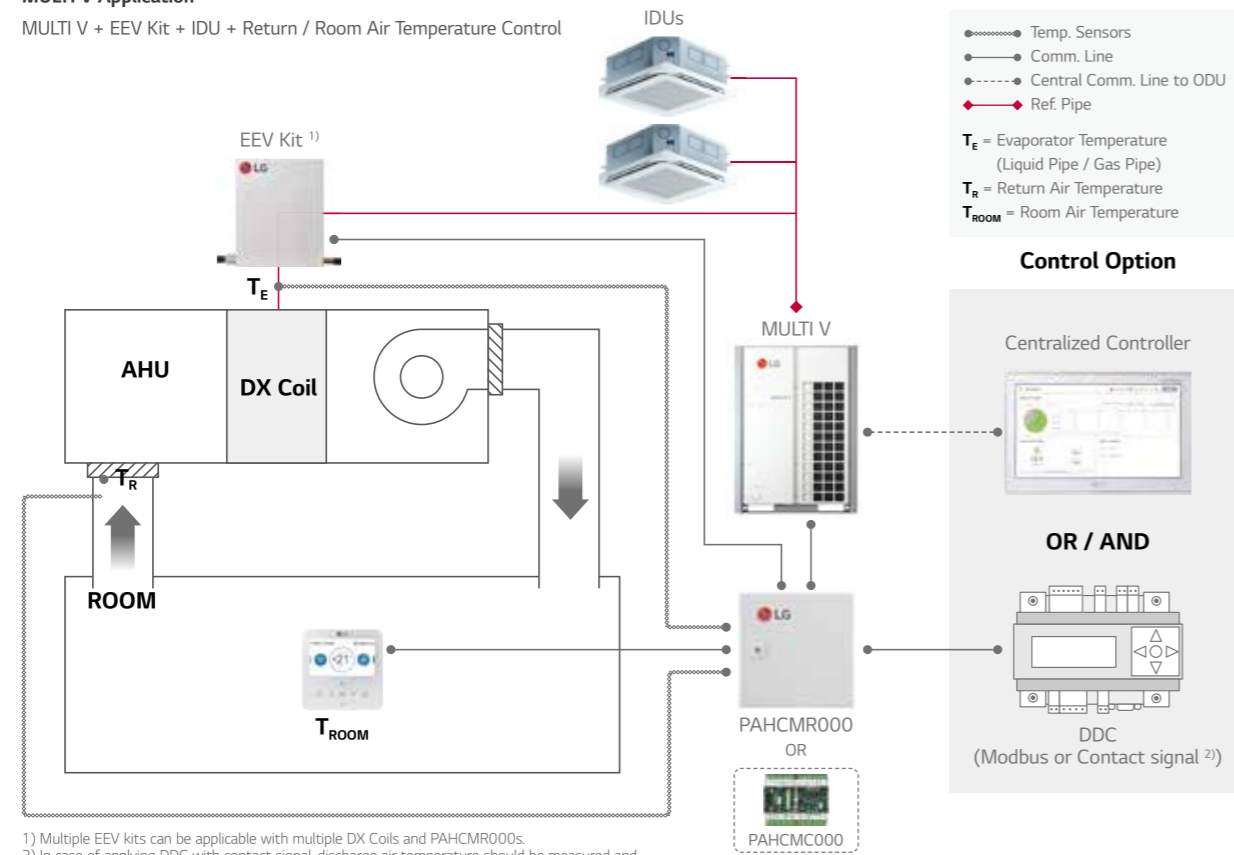
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# AHU Kit

## Communication Kit & Controller Module

### MULTI V Application

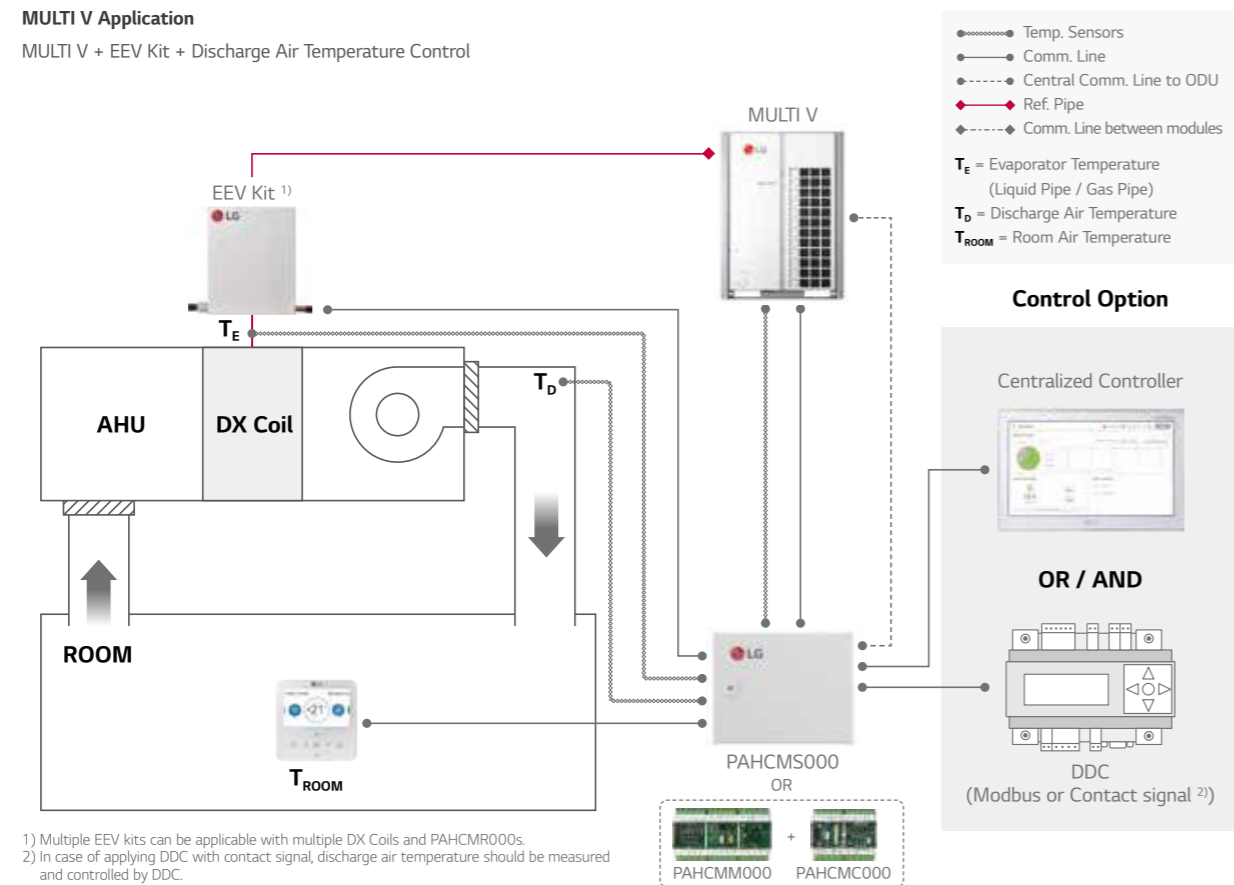
MULTI V + EEV Kit + IDU + Return / Room Air Temperature Control



1) Multiple EEV kits can be applicable with multiple DX Coils and PAHCMR000s.  
 2) In case of applying DDC with contact signal, discharge air temperature should be measured and controlled by DDC.  
 Note : For more detail, please refer to the PDB.

### MULTI V Application

MULTI V + EEV Kit + Discharge Air Temperature Control



1) Multiple EEV kits can be applicable with multiple DX Coils and PAHCMR000s.  
 2) In case of applying DDC with contact signal, discharge air temperature should be measured and controlled by DDC.  
 Note : For more detail, please refer to the PDB.

## Communication Kit Function

### Communication with DDC via Contact Signal

FUNCTION LIST	PAHCMR000 (PAHCMC000)	PAHCMS000 (PAHCMM000 + PAHCMC000)	TYPE	NOTE
Operation On / Off	On / Off	On / Off	Digital Input (Non Voltage)	-
Operation Mode	Cooling / Heating	Cooling / Heating	Digital Input (Non Voltage)	Available operation mode can vary depending on the settings of Communication Kit
Return (Room) Air Temperature <sup>2)</sup>	16 ~ 30 °C	-	Analog Input (DC 0 ~ 10 V / 20mA)	-
Control <sup>1)</sup> Discharge Air Temperature <sup>2)</sup>	-	-	-	Discharge air temperature should be controller directly by DDC using 'ODU Capacity Control'
Fan Speed <sup>3)</sup>	-	High / Middle / Low	Digital Input (Non Voltage)	-
Forced Thermal	On / Off	-	Digital Input (Non Voltage)	-
ODU Capacity	-	10 ~ 100%	Analog Input (DC 0 ~ 10 V / 20mA)	-
Emergency Stop	-	Stop / Normal	Digital Input (Non Voltage)	-
Operation	On / Off	On / Off	Digital Output (Max. : DC 30 V / 1 A, AC 250V / 1 A)	For PACHMR000, dip sw1-3 DO Type should be set 'Off' (Status), In this case, 'fan speed' cannot be monitored by DO ports
Operation Mode	-	-	-	It needs to be checked through control signal
Fan Speed	High / Middle / Low	High / Middle / Low	Digital Output (Max. : DC 30 V / 1 A, AC 250V / 1 A)	For PACHMR000, dip sw1-3 DO Type should be set 'On' (Fan Mode) In this case, 'On / Off, defrost, error Status' cannot be monitored by DO ports
Defrost Operation	Defrost / Normal	Defrost / Normal	Digital Output (Max. : DC 30 V / 1 A, AC 250V / 1 A)	For PACHMR000, dip sw1-3 DO Type should be set 'OFF' (Status), In this case, 'fan speed' cannot be monitored by DO ports
Error Alarm	Error / Normal	Error / Normal	Digital Output, Relay C contact (Max. : DC 30 V / 1 A, AC 250V / 1 A)	-
Compressor On / Off	-	On / Off	Digital Output, (Max. : DC 30 V / 1 A, AC 250V / 1 A)	-

1) Control functions for LG individual and central controller are not available in case of using together with DDC via contact signal.  
 2) The range of temp. is differ depending on the type of the controller.  
 3) To control fan speeds, DO port of the fan speed status should be connected to the fan control panel.  
 Note : For more detail information, please refer to the product data book.

### Communication with DDC via Modbus protocol

FUNCTION LIST	PAHCMR000 (PAHCMC000)	PAHCMS000 (PAHCMM000 + PAHCMC000)	NOTE
Operation On / Off	On / Off	On / Off	
Operation Mode	Cooling / Heating / Fan	Cooling / Heating / Fan	
Return (Room) Air Temperature	16 ~ 30 °C	-	
Control <sup>1)</sup> Discharge Air Temperature <sup>2)</sup>	-	○	Dip SW1-2 Discharge Temp. Control Type should be set 'On' Standard II : 16 ~ 30 °C Standard III <sup>4)</sup> : 12 ~ 50 °C
Fan Speed <sup>3)</sup>	High / Middle / Low	-	
Forced Thermal On / Off	-	-	
ODU Capacity Control <sup>2)</sup>	-	10 ~ 100%	Dip SW1-2 Discharge Temp. Control Type should be set 'On'
Emergency Stop	-	-	
Operation	On / Off	On / Off	
Operation Mode	Cooling / Heating / Fan	Cooling / Heating / Fan	
Return (Room) Air Temperature	○	-	Corresponding air temperature sensor connected to AHU Comm.Kit is required
Discharge Air Temperature	-	○	
Fan Speed	High / Middle / Low	High / Middle / Low	
Defrost Operation	Defrost / Normal	Defrost / Normal	
Error Alarm	Error / Normal, Error code	Error / Normal, Error code	
Compressor On / Off	On / Off	On / Off	

※ ○ : Applied, - : Not Applied  
 1) Control functions for LG individual and central controller are not available in case of using together with DDC via contact signal.  
 2) In case of PAHCMS000, control type between "Discharge Air Temperature" and "ODU Capacity Control" is selectable.  
 3) To control fan speeds, DO port of the fan speed status should be connected to the fan control panel.  
 4) Standard III wired remote controller after version 2.10.5a.  
 Note : For the Modbus memory map and more detail information, please refer to the product data book.